

THE DISTRIBUTION OF WATERHOUSE'S SKIPPER TRAPEZITES WATERHOUSEI MAYO & ATKINS (LEPIDOPTERA: HESPERIIDAE) IN WESTERN AUSTRALIA

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Abstract

Nine new localities for the Western Australian endemic skipper *Trapezites waterhousei* Mayo & Atkins are recorded. The species is known from 11 disjunct localities and apparently is restricted to rocky outcrops where the foodplant *Xerolirion divaricata* (Xanthorrhoeaceae) occurs.

Introduction

Trapezites waterhousei was described recently by Mayo and Atkins (1992) on the basis of specimens from two localities north of Southern Cross in Western Australia. In considering the conservation of this species, Dunn *et al.* (1994) stated that the distribution was insufficiently known to determine its status and recommended that survey work be undertaken to establish the distribution of *T. waterhousei* more accurately. This paper reports the results of searches for this skipper in southern Western Australia in 1993 and 1994.

Methods

A. Atkins (pers. comm.) first suggested that the foodplant of *T. waterhousei* may prove to be *Xerolirion divaricata* A. S. George. *X. divaricata* is a perennial herb closely allied to *Lomandra* and *Acanthocarpus* (both Xanthorrhoeaceae). Both of these latter genera are foodplants of *T. sciron* Waterhouse & Lyell and *T. argenteornatus* (Hewitson), the Western Australian congeners of *T. waterhousei*. In 1992 we confirmed *X. divaricata* as the foodplant of *T. waterhousei* at one of the then known localities for the species (Dunn *et al.* 1994). George (1986) recorded *X. divaricata* between Morawa and Southern Cross but noted that it is restricted to decaying granitic and lateritic outcrops. This narrow habitat requirement enabled us to target a number of potentially suitable locations for *T. waterhousei* by visiting sites where *X. divaricata* had been collected previously. Fifteen locality records were obtained from the Western Australian Herbarium and for 11 of these the locality information was sufficiently detailed to enable relocation. Three of these sites were examined in 1993 and a further six in 1994; the remaining two were not visited as part of this survey because of logistic constraints.

Results

Nine sites were found where *X. divaricata* was present and at all of these *T. waterhousei* was recorded. The total number of known sites for *T.*

Table 1. List of all known localities for *T. waterhousei*, based on surveys in 1993 and 1994 and localities recorded by Mayo and Atkins (1992).

Locality	Date visited	Site description
13 km NW of Payne's Find, on Payne's Find - Yalgoo Road (29°10'15"S, 117°38'50"E)	12.x.1993	Several granite outcrops
Breakaway Wells, White Wells station (29°34'50"S, 117°02'00"E)	12.x.1993	Large decaying granitic outcrop
1.5 km SE of junction of Clark Road and Vermin Proof Fence Road, approx. 25 km N of Wialki (30°14'40"S, 118°05'10"E)	4.x.1994	Very low granitic ridge
21.7 km N of junction of Clark Road and Bonnie Rock - Burakin Road, approx. 24 km N of Wialki (30°16'00"S, 118°04'15"E)	4.x.1994	Decaying granitic outcrop
South Wilgoyne Nature Reserve (30°48'20"S, 118°28'00"E)	4.x.1994	Large decaying granitic outcrop
Water Reserve #24277 (30°56'50"S, 118°43'15"E)	4.x.1994	Large decaying granitic outcrop
8.1 km E of Southern Cross Post Office, on N side of Great Eastern Highway (31°14'35"S, 119°24'10"E)	4.x.1994	Very low granitic ridge
Koolyanobbing Range, at base of transmitter tower, adjacent to airstrip (30°50'15"S, 119°32'00"E)	5.x.1994	High ironstone ridge
17.6 km NW of Southern Cross Post Office, on Bullfinch Road (31°07'00"S, 119°13'25"E)	5.x.1994	Large decaying granitic outcrop
15.2 km NW of Southern Cross Post Office, on Bullfinch Road (31°07'30"S, 119°14'30"E, previously recorded locality)	n/a	Large decaying granitic outcrop
13 km N of Mt. Jackson (not visited, previously recorded locality)	n/a	Unknown

waterhousei is thus 11 (Table 1). Seven of the new sites were located using the Herbarium records and the other two by examining suitable-looking granitic outcrops on route. At one site near Mingenew we were unable to relocate *X. divaricata* but did find the superficially similar *Acanthocarpus preissii* and suspect that the Herbarium record from this locality was based upon a misidentification. At this site, however, *T. argenteoornatus* was recorded (Williams *et al.* 1993). We were unable to relocate one Herbarium record of *X. divaricata*, from 8 miles (sic) north of Wialki.

Discussion

Most of the localities where *X. divaricata* occurred were prominent rocky outcrops, predominantly of decaying granite. At two sites, however, the decaying granitic surfaces were only marginally above the surrounding countryside. Two sites were located in reserves, one a nature reserve, and therefore may be considered relatively secure. The two sites we did not visit were Walyahmoning Rock Nature Reserve and an otherwise unidentified locality 64 km north of Bullfinch. We consider it likely that these will prove to be additional localities for this skipper, given that *T. waterhousei* was present at all seven sites where we relocated *X. divaricata*. Indeed, we consider it likely that many more local populations of *T. waterhousei* occur on rocky outcrops in the area between Payne's Find and Mount Jackson.

By the criteria of Dunn *et al.* (1994), *T. waterhousei* should be considered rare, i.e. "Taxa with small populations that are not currently 'Endangered' or 'Vulnerable', but are at risk. These taxa are usually localized within restricted geographical areas or habitats or are more thinly scattered over a more extensive range". As all known populations of this skipper are highly localised, each individual population may be at risk from catastrophic events such as fire, or from more chronic disturbances such as weed invasion or grazing. Monitoring of the more accessible populations of this skipper would enable early identification of potential threats to the species and we urge any interested entomologists who have the opportunity to do so.

References

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